

Claims

1. A tool for the cutting machining of precision bores in workpieces, with
 - a 'first machining step which has at least one geometrically defined cutting edge, and with
 - a second machining step which has at least one honing strip with geometrically undefined cutting edges, **characterized** in that the first machining step (9') has at least three support regions which are arranged at a distance from one another in the circumferential direction and which are designed and arranged such that they are supported on the wall of the precision bore during the machining of the latter.
2. The tool as claimed in claim 1, **characterized** in that at least one support region can be implemented by means of a circularly ground chamfer assigned to a geometrically defined cutting edge.
3. The tool as claimed in claim 1 or 2, **characterized** in that all the support regions can be implemented by means of circularly ground chamfers assigned to a geometrically defined cutting edge.

4. The tool as claimed in one of the preceding claims, **characterized** in that the geometrically defined cutting edge is part of a knife plate.
5. The tool as claimed in one of the preceding claims, **characterized** in that at least one support region can be implemented by means of a guide strip which is supported on the surface of the precision bore during the machining of the latter.
6. The tool as claimed in one of the preceding claims, **characterized** in that the honing strip (41) can be inserted into a groove (65) which is introduced into the basic body (67) of the tool (1) and which runs parallel with respect to the center axis (39) of the tool (1).
7. The tool as claimed in one of the preceding claims, **characterized** in that the groove (65) has a base (83) and two side faces emanating from the latter and is preferably of rectangular design, as seen in cross section.
8. The tool as claimed in one of the preceding claims, **characterized** in that the honing strip (41) is exchangeable and capable of being set.

9. The tool as claimed in one of the preceding claims, **characterized** in that the honing strip (41) is held by at least one clamping claw (61, 63) and preferably has at least one clamping groove (91) with a clamping surface (93) in a side face (69) facing the clamping claw.
10. The tool as claimed in one of the preceding claims, **characterized** in that the clamping surface (93) is inclined with respect to an imaginary center plane (M) of the honing strip (41), preferably at 10° , the clamping surface (93) approaching the center plane (M) from the bottom upward.
11. The tool as claimed in one of the preceding claims, **characterized** in that the honing strip (41) is provided with at least one bore (55, 57, 59) for receiving a first regulating means (73) of an adjusting device (71), said first regulating means preferably being designed as a regulating screw.
12. The tool as claimed in one of the preceding claims, **characterized** in that the honing strip (41) and/or the basic body (67) of the tool (1) are/is provided with a bore for receiving a second regulating means (75) of the adjusting device (71), said second regulating means

preferably being designed as a thrust piece.

13. The tool as claimed in one of the preceding claims, **characterized** in that the regulating means (73, 75) have a continuous coolant/lubricant duct (77).
14. The tool as claimed in one of the preceding claims, **characterized** in that the base (43) of the groove (63) has at least one coolant/lubricant outlet.
15. The tool as claimed in claim 11, **characterized** in that the coolant/lubricant outlet is in alignment with the coolant/lubricant duct (77) provided in the regulating means.
16. The tool as claimed in one of the preceding claims, **characterized** in that the outer surface (45), coming into engagement with the surface of a precision bore during the machining of the latter, of the honing strip (41) has a coolant/lubricant groove (53) intersecting the bore (55, 57, 59) for receiving the first regulating means (73).
17. The tool as claimed in one of the preceding claims, **characterized** in that the third machining step (15) has at least one guide strip (47, 47', 49, 51).

18. The tool as claimed in one of the preceding claims, **characterized** in that a third machining step is provided.
19. The tool as claimed in one of the preceding claims, **characterized** in that the tool (1) is of modular construction and the machining steps (3, 9, 15) are exchangeable.
20. The tool as claimed in one of the preceding claims, **characterized** in that the connection of the machining steps to one another takes place by means of a precision interface.